

Date: Tue, 26 Jan 93 10:38:33 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #115
To: Info-Hams

Info-Hams Digest Tue, 26 Jan 93 Volume 93 : Issue 115

Today's Topics:

(none)
 DSP and the Future
 General Class Licence - HELP!!!!
 Ham Radio Causes Cancer!
 Info needed on BC779B & R270/FRR surplus
 Looking for Heath HW-8 Manual to Copy
 MFJ HF Vertical Question.
 No-Codes
 OPDX Bulletin #96 - January 25, 1993
 re: ANTENNA HANDBOOK
 Through-the-glass antennas (2 msgs)
 True Confessions From KG7BK

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: 26 Jan 93 16:33:17 GMT
From: news-mail-gateway@ucsd.edu
Subject: (none)
To: info-hams@ucsd.edu

Hi,
has nyone had any luch at driving PC serial ports at 45 or 50 baud. If not
has anyone had any luck at using software to drive a PC parallel port as a
TTL serial port at the baud rates (it should certainly be possible). A friend
of mine has bought a RTTY demodulator kit, and a TTL to RS-232 level converter
kit, but the PC doesn't seem to want to handle the slow baud rates required.

RTTY to ASCII conversion is handled by the use of a lookup table take from a book on Amateur Radio Computing.

Thanks for any help,

73,

Paul

GW7KES@GB70NV pdu@ua.nrb.ac.uk

Date: 26 Jan 93 17:53:12 GMT
From: news-mail-gateway@ucsd.edu
Subject: DSP and the Future
To: info-hams@ucsd.edu

There's nothing magic about 455 KHz for an IF frequency. In the '50s, I had a Hallicrafters SX-??? that had a 50 KHz last IF frequency. Thus, instead of having to sample at 1 MHz, such an IF frequency could be sampled at 120 KHz or so, well within the range of present-day DSP chips. An added bonus is that the 50 KHz IF filters already have a sharply selective response.

Date: 26 Jan 93 03:23:14 GMT
From: munnari.oz.au!spool.mu.edu!olivea!gossip.pyramid.com!pyramid!infmt!seashore!randall@network.UCSD.EDU
Subject: General Class Licence - HELP!!!!
To: info-hams@ucsd.edu

slanka@chaos.cs.brandeis.edu (Ishantha Lokuge) writes:

>Hello!

>Could someone tell a good way to prepare for the general class
>license? I am looking for a book that contains the material and
>the general class question pool. Also, some tapes for code. Thanks
>in advance for your help. Please email to:

I really like the Gordon West material. Radio Shack sells it as the "General Class" course. He makes CW relatively fun and painless. He breaks up the code into easy-to-digest lessons. The ARRL tapes just go on and on into boring infinity.

After trying the Ameco and ARRL tapes, it was Gordon West that

finally got me over the 13 WPM hump.

73 DE KK6MY

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=====
Randall Rhea                                Informix Software, Inc.
Project Manager, MIS Sales/Marketing Systems  uunet!pyramid!infmx!randall
-----
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Date: Mon, 25 Jan 1993 20:15:32 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!sdd.hp.com!
hpscit.sc.hp.com!hplextra!hpl-opus!hpnmdla!alanb@network.UCSD.EDU
Subject: Ham Radio Causes Cancer!
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, oopdavid@ubvmsd.cc.buffalo.edu (D.RODMAN) writes:

>Gentlemen, lets get a few things straight. First, Dr. Milham did not report
>that amateur radio causes cancer.

What he said was:

"... This large population-based study indicates that amateur radio operator licensees in Washington State and California have significant excess mortality due to acute myeloid leukemia, multiple myeloma, and perhaps certain types of malignant lymphoma. Avocational and/or occupational exposures to electric and magnetic fields should be among the possible etiologies considered in explaining this excess mortality."

That's about as close as a scientist writing in a technical journal will ever get to saying "ham radio causes cancer." Actually what I said was that the study "purportedly" showed that ham radio causes cancer. "Purport" means to have the appearance of claiming something.

>He did perform a statistical analysis
>of death certificates in his west coast area and compared causes of death
>with avocation. He did find that several diseases had a higher than expected
>rate of occurence than the normal population.

That is what I disagree with. I did a Monte Carlo analysis, assuming that the ham radio population had the same incidence of disease as the general population. Most of my simulation runs showed results similar to his.

>But recent European data is highly suggestive
>that 50 Hz fields are again associated with increased risk of childhood

>leukemia. Readers should try to understand this concept: Use of ham
>equipment has such low frequency fields, like any appliance with a
>large transformer.

... etc.

The fields from such transformers and similar sources are in the few milligauss range (typically 1 to a few ten's of milligauss.) As a point of reference, note that the earth's magnetic field is about 500 milligauss. Now I understand that the theory is that the human body is more sensitive to 50-60 Hz fields than to a "DC" field, but it would have to be a LOT more sensitive for there to really be a problem.

Also note that the field in a typical home just due to the house wiring is typically around 1-2 milligauss. And the field around something like a stove burner or microwave oven is in the high ten's of milligauss. If there really is a health problem associated with low levels of AC magnetic fields, we better rewire the whole country for DC.

Also, how come all the concern is about magnetic, rather than electric, fields? House wiring is roughly balanced (low emission) for magnetic fields, but not for electric. Anyone who has ever hooked a clip lead to a scope input has seen how much 60 Hz electric field we have floating around.

I'm all in favor of continued research into the health effects, if any, of E/M fields, but I feel that the sensationalistic media stories on the subject are way out of proportion to the probable dangers. It's likely that there is no significant effect. And even if there does turn out to be some effect, it's clear that it must be pretty small. (Even those studies that do show an effect place it far below the dangers of, say, cigarette smoking.)

AL N1AL

Date: Mon, 25 Jan 1993 19:17:30 GMT
From: saimiri.primite.wisc.edu!zaphod.mps.ohio-state.edu!pacific.mps.ohio-state.edu!linac!att!cbnewsc!k9jma@ames.arpa
Subject: Info needed on BC779B & R270/FRR surplus
To: info-hams@ucsd.edu

BC779 is military version of Hammarlund Super Pro (SP-400).
There were several versions with different frequency coverage.

Mine covers:
200 - 400 KC

2.5 - 5 MC

5 - 10 MC

10 - 20 MC

but don't recall the letter designation.

Comes in two units behind 19" rack panels - power supply and receiver itself. Single conversion superhet 2 stages of rf amplification.

Tunes through the standard combination of "bandset" and "bandspread".

IF has variable bandwidth through adjusting coupling in transformers, crystal filter, and AVC system input tapped off before second detector so AVC and "S" meter work even with BFO turned on! ANL uses temperature limited 6H6. Audio is push pull 6K6s.

Design very good for pre 1940 but uses older octal tube series. That is, RF amps are 6K7 instead of 6SK7, etc. Overall, a nice old RX but the stability leaves something to be desired. K5JKX had a series of articles in 73 magazine on stabilizing and updating this rig in the mid 1960s. I have an Army TM from the late 1940s with some service manual type info on this RX if you need more data.

Rest of Antique rig is a Meissner "Signal Shifter" and push pull 250TLs.

73 de K9JMA

--

Ed Schaefer AT&T Naperville, Il. jma@ihlpm.att.com 708 979 2480

Date: Tue, 26 Jan 1993 17:38:35 GMT

From: news.service.uci.edu!ttinews!calvin.tti.com!cole@network.UCSD.EDU

Subject: Looking for Heath HW-8 Manual to Copy

To: info-hams@ucsd.edu

Sorry to duplicate a posting from r.r.a.swap, but after a few days I haven't gotten a single lead, so I thought I'd try it here.

I just bought an HW-8 for a really good price, but it's a fixer-upper and it didn't come with a manual. Is there someone out there with an HW-8 manual who would let me borrow, copy and return it? All expenses paid, of course, and I'd be glad to make another copy or otherwise try to repay the favor.

Heath will sell a photocopy of part of the manual for \$15, but I'd like to have a copy of the whole manual and have some control over the copy quality.

Of course, it goes without saying that if anyone has a manual they'd sell, I'm interested.

Randy Cole KN6W
cole@soldev.tti.com
310/450-9111 x2628 days

Date: 26 Jan 93 03:13:10 GMT
From: gossip.pyramid.com!pyramid!infmtx!seashore!randall@uunet.uu.net
Subject: MFJ HF Vertical Question.
To: info-hams@ucsd.edu

billg@hpspdla.spd.HP.COM (Bill Gingras) writes:

>After living in an apartment for three years, which effectively forced
>me off the air, I'll be moving into a house next month. That means I
>should be able to get back onto HF again. Does anyone out there have
>any experience or knowledge about the new MFJ multiband vertical
>antenna? This is a top loaded, 1/2 wave antenna for (I believe) 10-40M
>which doesn't need ground radials and is only about 12 feet in length.

The last I heard was that the new MFJ Vertical and Loop were
"vaporware." None of the dealers had ever heard of them.

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Randall Rhea	Informix Software, Inc.
Project Manager, MIS Sales/Marketing Systems	uunet!pyramid!infmtx!randall

Date: Tue, 26 Jan 1993 03:37:46 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!usenet.ins.cwru.edu!magnus.acs.ohio-
state.edu!flinxwei@network.UCSD.EDU
Subject: No-Codes
To: info-hams@ucsd.edu

This whole subject about 'No-Codes' has gotten way out of hand. The whole point is this:

- people who earn their ticket, regardless of which, have some interest in our hobby and for that reason need to be warmly welcomed rather than

shunned. Is it no wonder why some new 'no code' operators get upset and use poor procedures when all they hear is constant flames.

When I earned my ticket, people were very helpful in getting me started off on the correct foot. Sure I made mistakes, but instead of hanging me, they helped me out. Henceforth I am learning the better practices of ham radio, not the correct way to chew out people who mess up.

We can't expect everyone who earns their ticket to be world class operator from the get-go, but we can help those (myself included) correct themselves in a polite and friendly fashion.

73,
Eric N8UNN

Eric Linxweiler
The Ohio State University

Mathematica Student Rep.
Wolfram Research, Inc.

e-mail: linxweiler.1@osu.edu -or- linx+@osu.edu
packet: n8unn@w8cqk.#cmh.oh.usa.na

Date: Mon, 25 Jan 1993 16:03:01 -0700
From: munnari.oz.au!spool.mu.edu!howland.reston.ans.net!bogus.sura.net!udel!
gatech!destroyer!cs.ubc.ca!unixg.ubc.ca!kakwa.ucs.ualberta.ca!ersys!ve6mgs!rec-
radio-info@network.UCSD.EDU
Subject: OPDX Bulletin #96 - January 25, 1993
To: info-hams@ucsd.edu

The Ohio/Penn Dx PacketCluster
DX Bulletin No. 096 (OPDX.096)
January 25, 1992
Editor Tedd Mirgliotta, KB8NW
Provided by BARF-80 BBS Cleveland, Ohio
Online at 216-237-8208 14400/9600/2400/1200/300 8/N/1

Thanks to the Northern Ohio Amateur Radio Society, Northern Ohio DX Association, Ohio/Penn PacketCluster Network, DL1HBT & DXNL, DF4RD, K4CEF & Southeastern Cluster Group, LW3DSR, OM3EA, K1ER, W4FOA, W4VP, N9KWW/KH6, K9AJ and KJ9U/KH6 for the following DX information.

ET, ETHIOPIA. ET3YU was reported on January 22nd at 1445z on 14025 kHz and that his signal was very strong long path in W4-land. The operator's name is "Dragan" and he uses a bug. QSL via direct to Box 60349, Addis

Ababa (or as he spells it Adis Abeba).

KH1, HOWLAND ISLAND (UPDATE). A fax was received, from Waikiki Terrace Hotel in Honolulu, Hawaii (18 Jan.), by Mike McGirr (K9AJ), stating: "the team has assembled here and are eager to get started. We fly tomorrow (19 Jan.) to meet the boat "Machias" at Christmas Island..... The call sign we plan to use during our operation from Howland Is. is AH1A. Aloha, Mike K9AJ/KH6." John (K1ER) informs OPDX, that there are "pilot stations" assigned to help assist the DXpedition. Their job is to provide the DXpedition team with information as to how well they are being heard and whether they need to change anything (e.g. times, bands). The European pilot station is Mark (ON4WW) and the U.S. pilot stations are K1ER, K0AB and WY0J (all located in Denver, CO). John also reported that as of January 23rd, the KH1 team has passed the half way point from T32 to KH1 (570 of the 1140 miles). They may arrive at KH1 on the 25th of January. The team reports that the WX is perfect with calm seas and clear skies.

KH6, HAWAIIAN ISLANDS. Ron (N9KWW/KH6) states he operates on 10 meters daily from 2200 to 0100z. He operates from the USS Willamette AO-180, an active duty NAVY ship (with permission from his Commanding Officer). So, if anyone needs KH6 or Pearl Harbor confirmed look for Ron on 28365 kHz +/- QRM. QSL with an SASE to NH6ZB. Ron plans to operate from many overseas ports as he gets permission from the host countries. Travels include Hong Kong, Singapore and others.

L1DSR, BERMEJO ISLAND (IOTA SA-021). The Radio Club Del Sur plans a DXpedition to Bermejo Island, which is situated 20 miles south from Bahia Blanca City. This island is actually deserted and it will be the first time that amateur radio will be operated there. L1DSR will take place April 2nd thru 4th, using CW/SSB. Suggested frequencies: 3690, 7090, 14190, 21290, 28590 and 50110. QSL information was not mentioned, but the address for Radio Club Del Sur is: P.O. Box 265, Mar Del Plata, 7600 Argentina.

S0, WESTERN SAHARA. There is no activity from here at this moment, but S01A and S0RASD plan to be active February 24th thru March 6th. A special 6 meter operation is planned on 50.110 MHz and also check the usual DX windows on other bands. QSL via EA2JG.

SU, EGYPT. SU1ER has been known to show up on the 14226 DX net starting around 1530z. SU1SR has also been heard on CW around 14025 kHz between 1600 to 1730z.

TT, CHAD. Ken (WA40B0), expects to return to TT8 around March 15, and he hopes he will have more opportunity to work from there than last trip. Meanwhile, Ken has announced on the INDEXA Net, that all cards received so far (approx. 650) for TT80B0 will be going out next Friday, January 29.

V73, MARSHALL ISLANDS. Richard (V73IO) will be in the Marshall Islands until January 29th. He has been heard on 18127 kHz between 2030 to 2200z, 24940 kHz around 2210z and 3797 kHz around 1015z. Also, try the Pacific Inter Island Net on 14315 kHz at 0800z, 28495, 21395, and above 14225 kHz. It has been reported he has 40 meter capabilities. Richard plans to visit Kwajalein, Bikini Atoll and Majuro. QSL via AH6IO.

VR6, PITCAIRN ISLAND. Raelene Christain (VR6RC) is active on 28310 kHz, SSB around 0000-0130z. She is 18 years old, new to HF, and seems to prefer 10 meters. Her recently issued General license allows her to use all HF bands. QSL to P.O. Box 1, Pitcairn Island, South Pacific via New Zealand. (The ship that brings in mail only comes 4 times a year, so be prepared for a long wait. Also, note that the generator for the island does not run 24 hours a day, so operation times might be erratic.)

ZK1, NORTH COOK ISLANDS. The "DX-News Letter" mentions that there should be a new operator, ZK1DT, on Penrhyn Island (OC-082) until 1996. There has not been any QSNs reported yet.

SARA (OM) QSL BUREAU. Harry, OM3EA, informs OPDX that the Slovak QSL Bureau mentioned in last week's bulletin is an independent one run by Pavel (OK3IA). The Central Radio Club of Czechoslovakia (CCRC), a member of the IARU, was divided into the Czech Radio Club (CRC) and the Slovak Amateur Radio Association (SARA). Both organizations have their IARU membership applications at the Region I HQ. SARA took over the Slovak part of the QSL Bureau from Prague to Bratislava and the address is: SARA (OM) QSL Bureau, Post Box 1, Bratislava 5, Slovakia.

FAX YOUR DX INFORMATION NOW! This is just in the testing stage, but faxing will be available Monday/Wednesday/Friday from 0430 to 2030z only. The number is 216-237-2816 and operates only Class 2 Fax. Use only the dates and times specified because this is not a dedicated line.

Excerpts and distribution of The OPDX Bulletin are granted as long as OPDX/BARF80 receive credit. To contribute DX info, call BARF-80 BBS online at 216-237-8208 14400/9600/2400/1200/300 and leave a message with the Sysop or send InterNet Mail to: aq474@cleveland.freenet.edu or send BitNet Mail to: aq474@cleveland.freenet@cunyvms or send PRODIGY Mail to: DFJH48A or send a message via packet to KB8NW @ WA8BXN.OH.USA.NA

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Jim Reisert	Internet: reisert@mast.enet.dec.com
Digital Equipment Corp.	UUCP: ...decwrl!mast.enet.dec.com!reisert
146 Main Street - ML03-6/C9	Voice: 508-493-5747
Maynard, MA 01754 FAX:	508-493-0395

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- Postings to rec.radio.info: rec-radio-info@ve6mgs.ampr.ab.ca

- rec.radio.info administrivia: rec-radio-request@ve6mgs.ampr.ab.ca

Date: 25 JAN 93 20:02:56
From: pa.dec.com!engage.pko.dec.com!nntpd.lkg.dec.com!ryn.mro4.dec.com!
empror.enet.dec.com!pierson@decwrl.dec.com
Subject: re: ANTENNA HANDBOOK
To: info-hams@ucsd.edu

In article <C1DCL7.C67@constellation.ecn.uoknor.edu>,
jahern@geohub.gcn.uoknor.edu (Jud Ahern) writes, in part:

>In article <1jr0e3INNnbn@shelley.u.washington.edu>
>dbillon@stein.u.washington.edu (Damien Billon) writes:
>>
>> I am looking for a good antenna handbook describing how to build HF, VHF,
>>UHF... antennas. Any idea ?
...
>Sure: The ARRL Antenna Handbook. Also the ARRL Antenna Compendium,
>although I haven't actually seen and used the latter. You might
>also very well find what you need in the ARRL Handbook, which is
>probably one of the best investments a ham can make.

Second that. With one hint: I have found some antenna information
in the ARRL Handbook that is NOT in the ARRL Antenna Handbook. Curious.

thanks
dave pierson |the facts, as accurately as i can manage,
Digital Equipment Corporation |the opinions, my own.
40 Old Bolton Rd |I am the NRA.
Stow, Mass, USA
01775 pierson@msd26.enet.dec.com
"He has read everything, and, to his credit, written nothing." A J Raffles

Date: 25 Jan 1993 17:20:10 -0800
From: agate!spool.mu.edu!howland.reston.ans.net!bogus.sura.net!darwin.sura.net!
mojo.eng.umd.edu!news.isi.com!news.isi.com!not-for-mail@ames.arpa
Subject: Through-the-glass antennas
To: info-hams@ucsd.edu

Does anyone know what affect, if any, rear window defroster wires have on
through-the-glass antennas?

--

Jerry Gardner (jerry@isi.com) | "Violence is the last refuge of
Integrated Systems, Inc. | the incompetant" - Isaac Asimov

Date: Tue, 26 Jan 1993 05:18:48 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!howland.reston.ans.net!
bogus.sura.net!darwin.sura.net!rouge!jab0684@network.UCSD.EDU
Subject: Through-the-glass antennas
To: info-hams@ucsd.edu

John, WD40QC, mentions the procedure for the antenna/specialists
on glass unit. However my faulty/defective was not from antenna specialists
rather it was a LARSEN KG 2/70, which netters are once again, cautioned to avoid.

73's DE kb5udf

Date: 26 Jan 93 17:52:31 GMT
From: news-mail-gateway@ucsd.edu
Subject: True Confessions From KG7BK
To: info-hams@ucsd.edu

All this talk about no-code techs leads me to confess that when I got
my first license in 1951, (Novice WN5DXP), I not only memorized the
answers to the written questions, I actually memorized the individual
letters of the Morse code without knowing or understanding any of the
history and theory behind it and I could only copy letters, not words.
Fortunately, over the next 42 years, I learned a lot from just being
a Ham. That's the whole purpose for the existence of an entry-level
license. I'll bet that the majority of the high-and-mighty coded-hams
could not copy words when they took that first 5 wpm test.

Date: 26 Jan 1993 03:02:37 GMT
From: saimiri.primate.wisc.edu!usenet.coe.montana.edu!news.u.washington.edu!
stein.u.washington.edu!cummings@ames.arpa
To: info-hams@ucsd.edu

References <C1E2np.G98@anomaly.sbs.com>, <1k05j9INN2u5@shelley.u.washington.edu>,
<C1FMon.4q4@anomaly.sbs.com>N
Subject : Re: Real NoCodes

In <C1FMon.4q4@anomaly.sbs.com> kd1hz@anomaly.sbs.com (Michael P. Deignan) writes:

>cummings@stein.u.washington.edu (Michael Cummings) writes:

>> But it's also easy to see it for what it is: A series of
>>mean-spirited generalizations about "no-codes" disguised as humor. It's a
>>classic example of someone wanting to put down a whole group of people
>>while maintaining an easy excuse for doing so.

>Gee, where was your condemnation of the "Real hams...." list which was
>posted shortly before my "Real no-codes" list? Two different standards?

You're changing the subject. Combining this with the tactic I
described above and your earlier "you forgot ask me if I care" zinger, I
have a pretty clear picture of how you argue.

But, just pretending it's relevant for the moment, I have yet
to see the article you refer to. Maybe I missed it, or maybe it hasn't
gotten to my site yet.

--

Michael Cummings NX7E

cummings@u.washington.edu

"To be hit by Moriyama's fastball is an honor exceeded only by being
crushed under the wheels of the Imperial carriage." - _You Gotta Have Wa_

Date: Tue, 26 Jan 1993 02:37:25 GMT

From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!darwin.sura.net!
haven.umd.edu!wam.umd.edu!adam@network.UCSD.EDU

To: info-hams@ucsd.edu

References <kd1hz.1@anomaly.sbs.com>, <1993Jan25.004759.10521@wam.umd.edu>,
<C1E2nJ.G8D@anomaly.sbs.com>md.

Subject : Re: Real NoCodes

In article <C1E2nJ.G8D@anomaly.sbs.com> n1mpq@anomaly.sbs.com (Tony Pelliccio)
writes:

>n1mpq/aa Control Operator for 2x2ARA, Providence, RI

Stud. Can I have your autograph?

>And yes, my 2x2 call is on the way, thank gh0d! I'd hate to be associated
>with a no-code N#xxx call like yours. Eeeewww!

>

I hope your spell-check program is coming with it. And face it, you'll
always remember N1MPQ, Tony.

Date: Mon, 25 Jan 1993 18:13:28 EST
From: uunet.ca!xenitec!lemsys!clemon@uunet.uu.net
To: info-hams@ucsd.edu

References <kd1hz.1@anomaly.sbs.com>, <1993Jan25.004759.10521@wam.umd.edu>,
<C1E2H5.G3G@anomaly.sbs.com>lem
Subject : Re: Real NoCodes

In article <C1E2H5.G3G@anomaly.sbs.com>, Michael P. Deignan writes:

> >Mr. High and mighty, stay on HF. We appreciate the over here on 2m.
>
> Nah, we stay on our private UHF repeater.

Somehow that doesn't surprise me.

>
> MD
> --
> -- Michael P. Deignan, KD1HZ -----
> -- Domain: mpd@anomaly.sbs.com - I'm not a bigot, -

.. -> .. I'm afraid I disagree.

> -- UUCP: ...!uunet!anomaly!mpd - I hate everyone... -
> -- Telebit: +1 401 455 0347 -----

.. -> .. Except yourself and anyone "good" enough
to be your friend (almost an oxymoron).

--
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AX.25 Packet: ve3xcl@ve3euk.#SWON.ON.CAN.NA | Waterloo, Ontario, CANADA

End of Info-Hams Digest V93 #115
